DOCUMENT RESUME

ED 091 291 SO 007 488

TITLE	The Twenty Year Forecast. Prospectus 1974.
INSTITUTION	University of Southern California, Los Angeles. Center for Futures Research.
PUB DATE	74
NOTE	21p.
EDRS PRICE	MF-$0.75 HC-$1.50 PLUS POSTAGE
DESCRIPTORS	*Business; *Data Collection; Economics; *Futures (of Society); Industry; Pilot Projects; Planning; Policy Formation; *Prediction; *Social Change; Social Planning; Social Problems; Technology
IDENTIFIERS	Delphi Method

ABSTRACT

An outline of a major project of research and analysis to be undertaken by a graduate school of business administration is described as a continuing series of studies designed to provide a unique data base for planners in the private and public sectors. The data base would be derived from the intersection of significant social, economic, and technological trends and other probable future occurrences. The forecasts would draw on techniques and methods that are being developed for more accurate social and corporate planning, tracing the probable future consequences of current policies and practices, and exploring the potential of alternative courses. The background of fundamental issues that will require resolution in the next decades is presented; the objectives and principles of the pilot study to be conducted are noted; and program priorities--energy and social change, new organizations and institutions, social contracts, and manpower problems--are enumerated. The intended sequence of program processes is discussed and a budget proposed. (Author/KSM)

ED 091291

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

Center for Futures Research

UNIVERSITY OF SOUTHERN CALIFORNIA
GRADUATE SCHOOL OF BUSINESS ADMINISTRATION

SP 007 488

THE TWENTY YEAR FORECAST

PROSPECTUS

1974

THE TWENTY YEAR FORECAST

PROSPECTUS

Decision makers in industry and government are today confronted with hard choices among an array of courses of action. However, several significant changes have conspired in the operating environment to make traditional problem solving obsolete. Among these occurrences are:

o An increase in the urgency of problems - The stepped-up tempo of change no longer affords us the luxury of waiting for events to transpire before we act.

o A change in the nature of problems - Today's problems are no longer isolated from each other; rather, they interact aggressively with each other. It is increasingly difficult, then, to take direct action on a problem because its cause is often unknown and the action may cause greater problems elsewhere in the system.

o A failure of old ideologies; lack of a value consensus - We no longer have reliable guides to the future. We have selectively institutionalized the best ideas of the 19th century ideologies, and have discarded the emotional and misguided chaff. The old, simplistic ideologies no longer serve in a complex and pluralistic world. Moreover, there seems to have been a loss of consensus on any values; without common goals, we cannot agree on policies.

At the same time, while these events have militated against taking meaningful action, another set of occurrences now appears to offer the promise of meeting the emerging problems of our society and economy. Among these we find:

o An increased recognition of the need for planning - The energy crisis and the failure of the War on Poverty are among the notable developments that have brought home to Americans the fact that it is remiss to wait for a crisis before taking action, and that it is a waste of national resources to act without a fuller understanding of the ultimate and second-order consequences of action.

o A more reliable forecast capability - New planning and analytical techniques now permit us to foresee problems long before they become crises.

- An increase in the ability to control and to change - Untoward events need no longer be viewed as inevitably occurring; we now have the technological and intellectual capacity to form a more desirable future.

In light of these developments, the Graduate School of Business Administration of the University of Southern California has been developing for over a year a major project of research and analysis. This project, The Twenty Year Forecast, will be a continuing series of studies designed to provide a unique data base for planners in the private and public sectors. This data base will be derived from the intersection of significant social, economic and technological trends and other probable future occurrences. The forecasts will draw on the latest techniques and methods that are being developed for more accurate social and corporate planning. As described in this proposal, the forecasts will trace the probable future consequences of current policies and practices and explore the potential of alternative courses.

I. Background

Our society is beset with innumerable problems which constantly seem to be growing in number and complexity. As a result, we are faced with an array of fundamental issues that will require resolution over the next decade or two. Among these we find:

- Unpredictable changes in the economy
- Urban deterioration
- Pollution
- Crime and the inadequacy of the criminal-justice system
- The drug problem
- Poverty
- Deficiencies in educational systems
- Inequality
- Job dissatisfaction
- Inadequate health care

- o Problems of the aged
- o Problems of transportation and communication
- o Uncontrolled science and technology
- o Changing values
- o Problems of race relations
- o Inefficient government
- o Alienation from governmental processes
- o Resource limitations
- o Unchanneled growth
- o Institutional decay
- o Anomie
- o Corporate social irresponsibility
- o Deterioration of family ties
- o Unemployment

These dominant problems, from the growth issues of environment and energy to the social issues of changing work and family patterns, present a challenge to all decision makers and to citizens generally who desire thorough, just, and equitable change on the one hand, and the preservation of our democratic and productive system on the other.

Some of these issues are highly controversial, in the sense that clearly defined, but incompatible, alternatives are being advocated by opposing groups. More often, these issues are problematical rather than controversial, since no acceptable course of action, rather than several, has been discovered toward their resolution. In all cases, the problems posed by these issues interact in myriad ways with one another, and they are of concern to both the public and private sectors. If current trends are allowed to run their natural course unchecked, the problems they create will threaten to erode our basic institutions, to destroy our morale, and to damage our social, political, and economic systems irreparably.

These issues are immune to solutions derived from traditional academic research or from conventional corporate or social planning, because of their interactive nature and the rapidity with which the operating environment changes. Moreover, solutions are not to be found by empirical

trial and error or even through such relatively new techniques as cost/benefit analyses. Because these problems are systemic in nature, they cannot be reduced to mathematical equations.

There is a growing awareness of the need for integrative studies of these ecological, social, economic, technological, and human issues. We need well-informed forecasts and analyses in order to anticipate future problems. This, in turn, would permit adequate lead time for action. As U.S.C.'s Olaf Helmer has written about the "Future State of the Union":

> "... as the pace of change accelerates and the complexity of societal problems grows, the need is becoming increasingly urgent for giving ourselves, individually and as a nation, an accounting of what major options are available to our society. A thorough awareness of such options and of the courses of action that might be pursued to attain them would give a larger fraction of the public a new chance to participate in the formation of its own future and provide decision makers with a more rational planning basis."

America is relatively free to choose the kind of future it wants for itself and its children. It is a matter of identifying our options, examining the consequences of various policy alternatives, agreeing on common goals, and developing strategies for achieving them. Of course, nothing could be more difficult; but nothing is more important. In pursuing this critical task, decision makers will need some objective guides to their choices -- guides in the form of increased information about future potentialities as well as in terms of improved methods of applying such information to the planning process.

II. Objectives and Principles

U.S.C.'s Graduate School of Business Administration is taking the initiative in organizing what will at first be a very modest effort to find some of these objective guides. During the present year an intensive

pilot study is being conducted. It is to be followed, if successful, by similar, more ambitious efforts in subsequent years. All of these efforts will be directed at meeting the following broad objectives:

- o To provide the most responsible forecasts available of current social, economic, and technological trends.
- o To identify new public policies and practices for private institutions which will shape the future to more adequately meet human and economic needs.
- o To analyze the future consequences of these trends and policies in the public and private sectors.
- o To analyze the effects that emerging trends and alternative policies might have on the society and its productive institutions.

In attempting to meet these objectives, we intend to adhere to the following principles:

- o The forecasts will draw upon a wide variety of perspectives and disciplines, avoiding parochial academic concerns.
- o The forecasts will utilize the latest forecasting and analytical techniques; e.g., the Delphi method, cross-impact analysis, trend impact matrix.
- o The forecasts will be designed to develop new, indirect, holistic, and long-range techniques and methods of analysis.
- o We will draw on only the highest calibre of people in business, government, and academia to work on the forecasts.
- o The forecasts will translate the often esoteric language of experts into analyses that are responsive to the immediate concerns of policy makers.

III. Program Priorities

Below, we enumerate several fundamental and compelling areas for study illustrative of those that will constitute our agenda for the next several years of operation. A Council on the Future (composed of leading scholars from the U.S.C. community and potential users in

business and government) will help to identify such issues further and establish priorities among them. However, the first area for a forecast, Energy and Social Change, has been pre-selected because of its timeliness and suitability as a pilot project.

1. Energy and Social Change

Because of the energy crisis, supply and demand questions concerning natural resources have become a primary focus of study in the public and private sectors. Following on the heels of the "limits to growth" controversy, the energy crisis has riveted our attention to a vision of an oil barrel inexorably being drained. As is typical at such times, a crisis mentality has appeared, even among those who normally eschew the concept of crisis.

Of course, there are good reasons why attention is being drawn to the depleted barrel of oil, but there are equally good reasons why we should think ahead to some of the higher order and future consequences of alternative uses of natural resources. First, we might find that not all the issues of growth and resource allocation are fraught with inevitable disaster. Indeed, we might find ways to avoid future crises and to create a higher quality of life in the process. Second, the resources of the nation extend to more than fossil fuels; they encompass its land, air, water, minerals, and people. Third, alternative configurations of the use of this wealth of resources will do much to determine the quality of our lives: these resources will do much to determine the shapes of our cities, the modes of our transportation, the patterns of our work and leisure, our styles of life, our forms of communications

and our intergroup relationships. If we explore analytically the possible tradeoffs and complementarities between such factors as land use, transportation and various forms of energy, we may identify as many future opportunities as crises.

Accordingly, our first forecast will explore the important second and third order social and economic consequences of alternative interactions between technological developments, energy use and resource allocation to see if there are ways in which the nation can plan to avoid future crises and to enhance the quality of life.

Of course, we cannot explore all the issues implied by this topic in our first inquiry, but below are some sub-topic candidates for consideration:

- What are the opportunities presented by the energy crisis? Are there new modes of existence at a high standard of living that are energy-efficient? (For example, what efficiencies can be realized in a fifty-story building or "archology" that includes separate floors for apartments, offices, schoolrooms, shopping, etc.?) On the principle that one industry's loss may be another's gain, what new industries will emerge from the current crisis similar to the way fossil fuels grew in the place of a degenerated whale oil industry?

- How might alternative uses of resources affect the shape of cities? Will there or should there be a large-scale rehabilitation of housing in the urban core and a retrenchment from the suburbs? How might geodesic domes and other novel solutions to the conservation of energy affect urban sprawl?

- To what extent can sophisticated telecommunications be substituted for transportation in such applications as education, shopping and office work? Can we substitute efficient telecommunications for ecologically wasteful and less efficient forms of printed communications?

- If and when the time comes when new sources of energy will provide ample, cheap and non-polluting energy, what can be done to make the most of this opportunity, and what new ecological or environmental problems will have to be anticipated and dealt with?

o What are the demographic effects of alternative uses of resources? Will there be a full-scale migration to warmer climates? What alternative land uses and their effects on urban problems, tourism, recreation and industry? What is the relationship between zero population growth and the use of resources? Are there emerging long-term needs for manpower in new resource-space and energy-related fields, and how can these be met?

o What are the social consequences (for representative government, for economic cooperation, etc.) of living with shortages or suddenly finding ourselves in a period of abundance, etc., after a period of scarcity? Is there a need for new institutions to respond to the social, political, and economic dislocations that might occur?

2. New Organizations and Institutions

Public and private organizations are increasingly experiencing difficulties in defining their objectives, and in achieving these objectives once they are defined. To people within these organizations, and to the public without, the gap seems to be widening between promise and performance. Classic examples of such failure are found in the government: from such relatively new agencies as the Office of Economic Opportunity and the Department of Housing and Urban Development to old-line agencies such as the Postal Service, little headway is made on the problems that society charges these agencies to correct. The corporate world shares these problems: railroads, securities and autos are examples of industries that to one degree or another have exhibited organizational ineffectiveness.

At the same time, some new (and apparently successful) forms of organizations are sprouting up around the world. So-called multinational corporations are increasing in numbers and economic power, bringing into

focus a variety of new questions concerning international trade regulations, the export of jobs, international unions, and the financial manipulation of politics. An "intersector" has also appeared. Neither public nor private in nature, such organizations as Ralph Nader's Law Center, Common Cause, the RAND Corporation and the Ford Foundation wield considerable economic and political power and influence (not all of it universally viewed as beneficial to the society). And, the greatest amount of growth in our economy has occurred at the level of state and local governments, with a concomitant proliferation of new organizations and jobs.

The nature, shape, size, form of ownership, and type of regulation and control of organizations are questions central to the success or failure of a nation. Institutional rigidities can thwart the emergence of new responses to society's problems. In human, economic and political matters, organizational structure is often the factor determining success or failure, satisfaction or dissatisfaction. Clearly, it is important to explore the proper organizational responses to the emerging problems of our rapidly changing world. A forecast of this area might examine such issues as:

- o Why do organizations become ineffective in carrying out their announced objectives? In the future, what will determine organizational effectiveness?
- o What new organizational forms are most likely to succeed in responding to future societal pressures and needs?
- o In the future, what will be the relationship between the size of the organization and a) its economic viability, b) its responsiveness to consumer needs, c) the job satisfaction of its employees, d) its proclivity to change direction, etc.

- o In the future, what will be the relationship between the form of ownership of the organization and the above factors? Are there ways to build the advantages of the private sector into public enterprises? Are there ways to make the private sector more responsive to human needs without also adding public sector liabilities? What new forms of public-private cooperation are available? Are there things currently being done by the public sector that could be better done by the private sector, and vice-versa?

- o What is the future of multi-national corporations?

- o What steps can be undertaken to enhance the viability of those organizations that are regarded as socially beneficial?

- o What are the prospects for more participative forms of management?

3. The Social Contract

Unlike war, social and economic intercourse is not a zero-sum game. The interests of the participants are not wholly opposed, and the outcomes of social and economic relations may benefit all if each acts wisely, or hurt all if they do not. To receive a high payoff for all requires a kind of resolve to be both cooperative and rational. Moreover, this must take place in a cultural environment in which actions of one party are met with appropriate and predictable responses by other parties. This pattern of expectations exists because each of us has given up some freedom (freedom to be irrational, freedom to harm others, etc.) for the safety, security and cooperation of others and for the protection (sanctions) of society. We call this agreement "the social contract."

The social contract is subject to being broken when one party sees the opportunity of behaving in a way that will bring high immediate payoff at the expense of others who are anticipating the socially sanctioned pattern of behavior. In a way, the choice is between (a) maximizing profits in the short-run and thus, destroying the contract; and (b) opting for long-run

profit in which the fortunes of others are apt to rise along with our own.

In ordinary human relations, we have taken great strides away from the jungle. Through custom and law we have succeeded in creating a cultural pattern in which the majority expects crime and other anti-social behavior not to pay. What is more, quite aside from the avoidance of legally actionable behavior, we have acquired numerous standards in our daily lives which go under such labels as "courtesy," "consideration of others," "charity," and so on; by now we simply think of these as "right" out of habit, and tend to forget that they are the result of a slowly evolving expectation of reciprocity

The same kind of evolution has taken place with regard to the behavioral patterns among business firms -- although if we look at such cases as Equity Funding there is reason to think that regression is likely to occur at any time. (The current parallel regression in the public sector is more likely to be temporary in nature, since it seems to have been caused by individual nefariousness rather than by a systemic decline in cooperativeness with the citizenry at large.) The area of human relations in which we are still comparatively closest to the jungle and most greatly in need of more civilized patterns of expectation is that of international relations. The subject of the Social Contract opens many interesting issues for a forecast including:

> o To what extent can we depend upon pacts between generations to be kept? Kenneth Boulding has written that "the support which the middle-aged give to the young can be regarded as the first part of a deferred exchange, which will be consummated when those who are now young become middle-aged and support those who are middle-aged who will then be old Similarly, the support which the middle-aged give to the old can be regarded as the consummation of a bargain entered into a generation ago." Can we expect such bargains to stand in a period of cultural change? For example, will the very young of today tolerate the high social security taxes (perhaps over 50%) that will be necessary to support the post war boom babies when they retire in 40 years?

o To what extent can we count on the underdeveloped world to honor its economic commitments to us when there is increasing pressure to nationalize all foreign investments?

o Will the marital pact cease to be a meaningful contract? If so, what are the likely consequences for the American family?

o Will the traditionally passive role of shareholders in large corporations change to more active forms of ownership?

o Will lower-level employees continue to accept direction from the top or will they demand more participation in the decisions that affect their work?

o Is crime, including employee theft and other white-collar crime such as tax evasion, likely to increase?

o Can we expect more, or fewer, or changed forms of government regulation of private enterprise, securities, commodities, etc.?

4. Manpower Problems

Futures forecasting and long-range planning is not new in society. As examples, commodities futures are an established part of our economy; college football teams schedule games as far ahead as fifteen years; and the manpower needs of our nation for the next 25 years are annually forecast by the Department of Labor. All three of these exercises are examples of outmoded forms of forecasting. They are more art than science. And manpower forecasting is, perhaps, the biggest gamble of them all. The track record of the nation in forecasting its manpower needs is dismal. Vocational education consistently trains young people for jobs that do not exist. On the other hand, there are often shortages of certain skilled workers. As a nation, we simply do not know what the skill and training requirements are for jobs in macro terms, nor what they will be in the future. Nor do we know how to place the right people in the right jobs. This area lends itself to the following kinds of forecasts:

- What are the emerging skill needs of industry? Will there be an even greater growth in the service sector? Where will technology create new skill demands and where will it create obsolescence?

- Who will do the dirty jobs of society when we have an educated workforce? Must we increase the pay for dirty jobs? Increase immigration?

- What kinds of manpower training will be effective in the future? Should we expand on-the-job training? Should it be government financed?

- Will there be need for a nation-wide system of worker retraining?

- What can be done to improve the placement of people into jobs at which they will be successful and find satisfying?

- Will the work ethic change so drastically as to create the need for new kinds of work arrangements and conditions?

5. Backburner Issues

The above issues are illustrative of those that will constitute our agenda over the next several years. We will be constantly on the lookout for relevant issues and be sensitive to the needs of the various constituencies we will serve. Our agenda will be open to change as issues become more pressing, and as our advisory body indicates changes in its interests. The following issues have been suggested as possible subjects for future forecasts:

- Changes in the Population of the United States
- Automation and Technology
- The Criminal Justice System
- Alternatives to Economic Growth
- Mass Transportation

IV. Program Processes

Our plan, for the first effort, is to begin by selecting three important public issues pertaining to Energy and Social Change and make these the subject of three parallel, closely related investigations. For example, the three issues to be investigated might be the following: (i) What are the opportunities presented by the energy crisis? (ii) If a serious and prolonged shortage of energy should occur in the U.S. in the next two decades, what can be done to attenuate its effect on economic and social conditions? (iii) If and when the time comes when new sources of energy will provide ample, cheap, and nonpolluting energy for the U.S., what can be done to make the most of this opportunity and yet to avoid any deleterious effects of resumed growth? The time horizon for the analysis of these issues will be on the order of twenty years, but the analysis will also focus on several nearer term benchmarks.

Our intention in dealing with these issues is not to become advocates for a particular solution. Yet, while striving to preserve strict academic objectivity, our approach will be pragmatic rather than esoteric.

We anticipate that a preliminary examination of the selected issues will identify potential future developments that are relevant to their resolution. That is, the operating environment within which these issues will have to be resolved will be seen to be importantly affected by the occurrence or nonoccurrence of certain events and by fluctuations in existing trends. These developments might be political in nature; they might be economic or demographic; they might represent societal or cultural changes, natural catastrophes, and so on. The next step, once the most relevant of these developments have been identified, will be to obtain

forecasts regarding the probability of their occurrence during the next decade or two and to gain some insight into the causes making them more, or less likely.

The term "forecast" implies both more and less than "prediction." No events of the future can be flatly predicted; instead, they must be described in terms of probabilities. An effort will be made to throw some light on the interdependence of potential future developments -- their "cross impacts" -- in order to obtain clues important to policy decisions. Such clues might help to identify events over which we have some control -- whose promotion would enhance the probability of occurrence of other, desired events over which we have no direct control. Thus, while forecasts fall short of predictions, they are potentially of considerable practical value by providing a sound basis for systematic long-range planning.

To carry out this analysis, three task forces (one for each issue) will be formed, consisting of a chairman and three or four additional members each. The assignment to each task force will consist of three subtasks:

- o to identify potential future developments relevant to the assigned issue;
- o to assemble a list of measures proposed for the resolution of the issue; and
- o to formulate and assess the consequences of alternative policies and action programs for dealing with the issue.

A Delphi study will be conducted concurrent with the activities of the task forces to provide a quantifiable basis for their projections.

The Delphi, based upon the potential developments identified by the task forces, would be conducted independently of their activities but its results would be made available to them as a resource on which they might draw.

To oversee the various activities of the forecast, a small steering committee has been appointed, operating under the auspices of the Center for Futures Research of the School of Business Administration. This task force includes Dr. James O'Toole, Director of the Twenty Year Forecast, Dr. Olaf Helmer, Quinton Professor of Futures Research, Dr. Claude E. Elias, Director of the School's Division of Research, and Dr. Burt Nanus, Director of the Center for Futures Research. As an indication of his personal commitment to this effort, Dean Ted R. Brannen also serves as a member of this committee.

While the Center for Futures Research will provide some of the administrative and support services for this project, it is evident from the interdisciplinary nature of the proposed undertaking that it cannot succeed without the cooperation of representatives from many other schools on the U.S.C. campus as well as experts outside the academic community.

Located at a university, the forecast project has unique access to experts in such diverse fields as law, medicine, sociology, economics, physics, urban affairs, gerontology, public administration, psychology, religion, engineering, and the humanities. The project will draw on this resource by establishing a University-wide Advisory Council. This council will help to identify issues, suggest individuals to

author commissioned papers and review the reports of the task forces.

Most important, for each issue, members of the advisory committee will be asked to identify the relevant questions that characterize his or her discipline. The purpose of this exercise is to provide a manageable synthesis of the knowledge of diverse sciences and humanities to help the task forces overcome the provincial constraints of their disciplines.

The faculty Advisory Council will be concerned with the operations of the project and will be a part of the "U.S.C. Council on the Future." This council, augmented with outside sponsor members, will have the following functions:

- o to help to select relevant issue areas and, within each area, the three issues to be investigated in depth;
- o to assist in the formation of task forces, suggesting, for example, non-academics who might serve on the task forces to provide the practical perspective of potential users; and
- o to act as a forum to which project findings can be reported.

.. Budget

The Twenty Year Forecast will be an ongoing program of the School of Business Administration and will, as such, require long-term funding. At this time, however, we are seeking $52,000 to support only the first forecast, Energy and Social Change. We are seeking to develop funding sources for all or part of this sum. Of course, this figure does not represent the true cost of the project, as a great amount of time has been and will be donated by members of the Steering Committee, and Council on the Future. The Center for Futures Research will also

provide time, resources and facilities to the project. Thus, the $52,000 represents only some of the direct costs, in addition to a small amount of University-imposed overhead on salaries.

The primary expenditure of the forecast will be a budget of $8,000 for each of the three task forces to assist them in their assignments. Of this amount, $4,500 is to be used at the task force's discretion, for soliciting position papers; for having experts appear before the group to "testify" on the subject; for having research assistants carry out appropriate library research; for utilizing forecasting methods; or for developing new methodologies for policy analysis. The remaining $3,500 will be used as partial compensation for the task force members' time. Following is an estimated budget breakdown:

1. Task Force Budget	3 x $8,000	$24,000
2. Delphi Study		10,000
3. Secretarial Services		7,000
4. Postage, Telephone, Xerox, etc.		3,000
5. Travel		3,000
6. Overhead on Salaries		5,000
TOTAL		$52,000